

Sustainability and Social Acceptance in a World Powered by Wind

6th Wind Energy Systems Engineering Workshop
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University of Colorado

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2022 Legislative Schedules

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1 STATES

SELECT ONE OR MORE STATES BELOW.

Alabama	Kentucky	North Dakota
Alaska	Louisiana	Ohio
Arizona	Maine	Oklahoma
Arkansas	Maryland	Oregon
California	Massachusetts	Pennsylvania
Colorado	Michigan	Rhode Island
Connecticut	Minnesota	South Carolina
Delaware	Mississippi	South Dakota
District of Columbia	Missouri	Tennessee
Florida	Montana	Texas
Georgia	Nebraska	Utah
Hawaii	Nevada	Vermont
Idaho	New Hampshire	Virginia
Illinois	New Jersey	Washington
Indiana	New Mexico	West Virginia
Iowa	New York	Wisconsin
Kansas	North Carolina	Wyoming

SELECT ALL STATES

2 POLICIES

SELECT ONE OR MORE POLICIES BELOW.

Economic Development	Infrastructure
Electricity Generation	Natural Gas Development
Emissions	Other Energy
Energy Efficiency	Regulatory
Financing and Financial Incentives	Transportation

SELECT ALL POLICIES

3 YEAR INTRODUCED

SELECT ONE OR MORE YEARS.

1 selected

4 BILL STATUS

SELECT ONE OR MORE BILL STATUSES BELOW.

Introduced	Passed One Chamber	Passed Both Chambers
Enacted	Failed	Vetoes

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What's the Big Deal?



“We are willing to fight for places that are central to our identities... this is especially true when important symbolic meanings are threatened by prospective change.”
(Stedman, 2002)

People care about sustainability and justice.



Beyond LCOE

- Materials sourcing
- End of product life – recycling? reuse?
- Labor practices
- Fair wages
- Wildlife impacts
- Ecosystem impacts



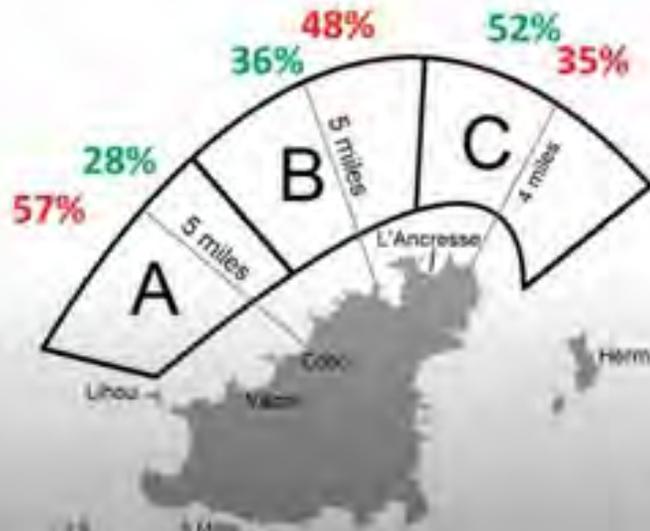
Wind Turbine Blades Can't Be Recycled, So They're Piling Up in Landfills

Companies are searching for ways to deal with the tons of thousands of blades that have reached the end of their lives.

By [Name]

tens rules after Iowa dumps dozens of wind turbine blades

What have we learned?



- Significant differences in support for same wind project in different locations
- Zone A least accepted (mean 2.48)
- Zone C most accepted (mean 3.07)

UK Survey by Patrick Devine-Wright (2019)

The same project with very similar technical specifications was viewed quite differently by locals.

People see energy autonomy as increasingly more important.

In studies in the Netherlands, U.S., and Germany, residents interviewed one year after offshore turbines were installed had more favorable opinions in support of the project.

Trust and fairness have great influence on support of a project. (Firestone, Huebner, 2019)

We have to involve host communities in planning.

Fitting the landscape

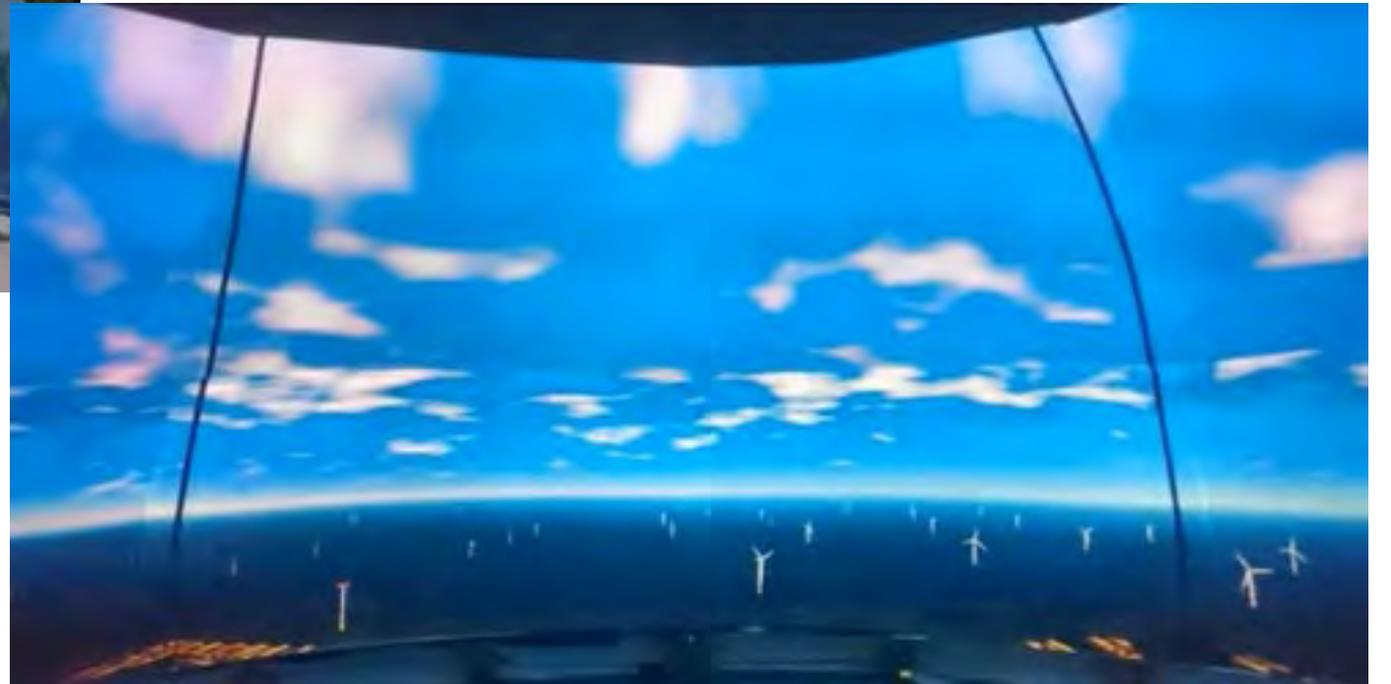
(Northern
Germany)



Can wind be part of the culture?



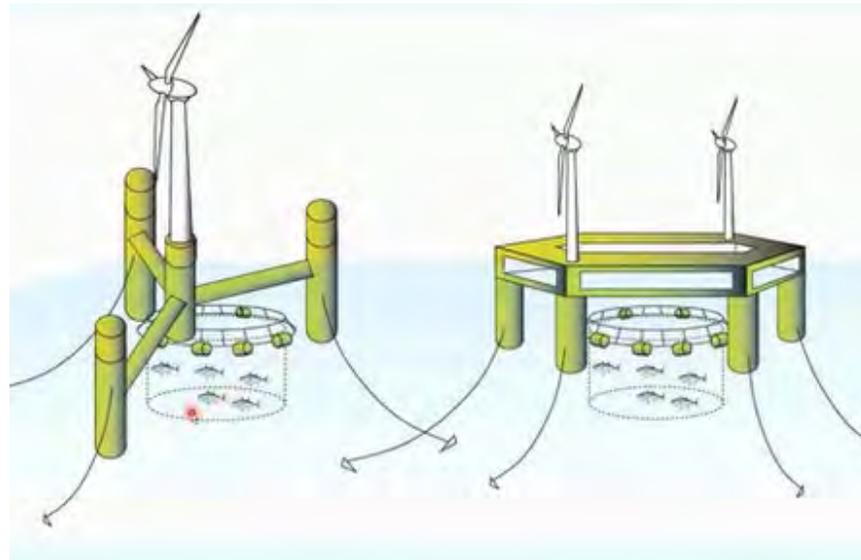
Offshore Wind Visualization during Planning



Co-benefits of Offshore Wind - Japan



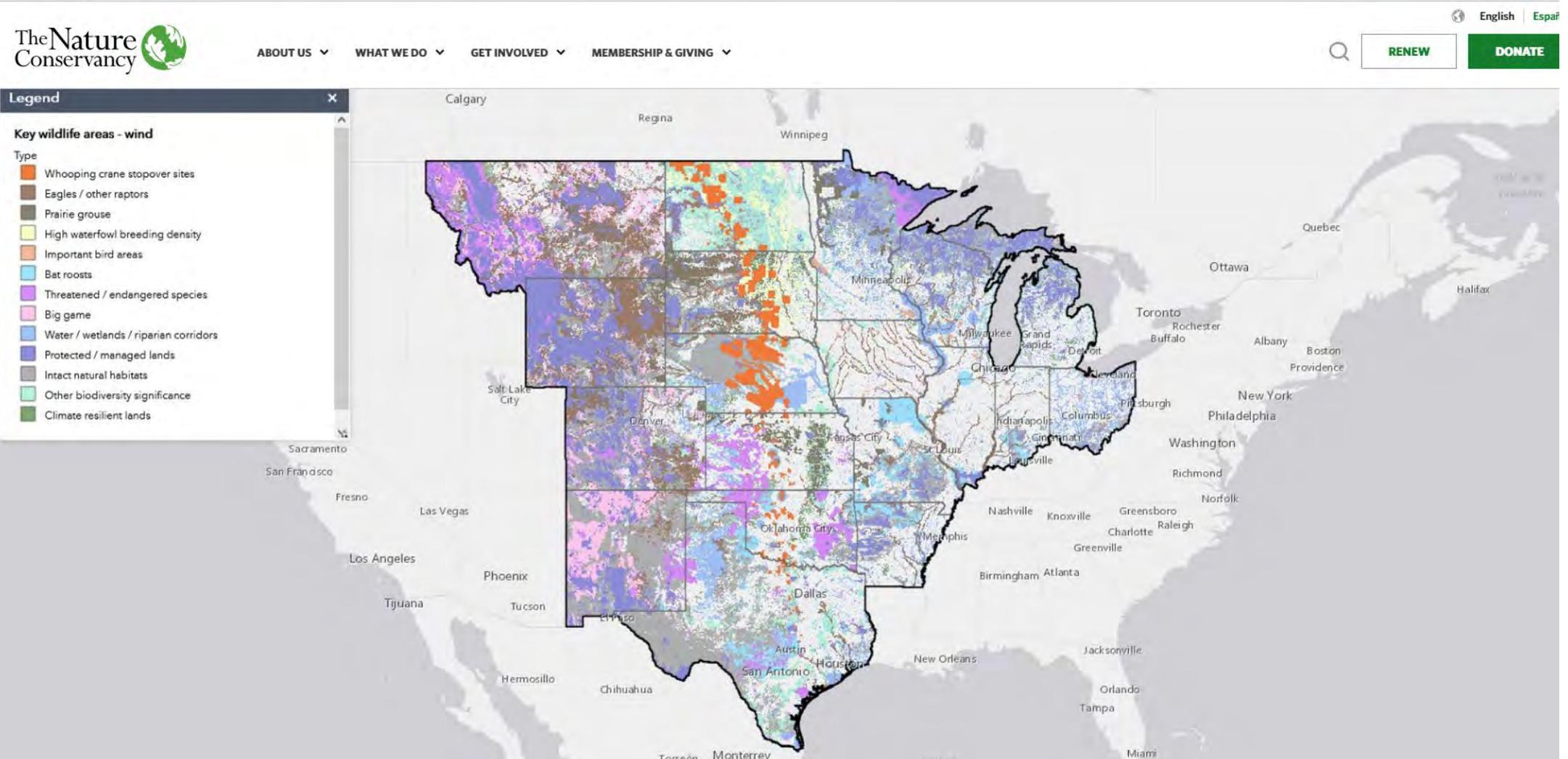
Source: Yashushi Maruyama 2019



Benefits:

- Creation of fishing ground
- Aquaculture
- Data collection (Oceanographic, weather)
- Sightseeing, tourism
- Electricity supply
- Monitoring for poachers
- Emergency supplies, shelter

Use Tools from Other Experts



References and Resources

IEA Wind - Social Science for Wind Energy Acceptance - Task 28 Website [Task 28 | IEA Wind TCP \(iea-wind.org\)](#)

IEA Task 28 Publications [Task 28 Publications | IEA Wind TCP \(iea-wind.org\)](#)

Brief lit review: Understanding Costs Associated With Wind Energy Opposition and Stakeholder Engagement. 2022. Liz Gill (NREL) and Joe Rand (LBNL) [IEAWindTask28_Cost-of-Oppostion-Breifing-Doc.pdf \(iea-wind.org\)](#)

Brief: Offshore Vs. On-shore Community Acceptance and Stakeholder Engagement Differences [Offshore IEA A4 3OFFSHOREvONSHORE_1June21.pdf \(iea-wind.org\)](#)

Brief: Community Benefit Schemes for Offshore Wind [Offshore IEA A4 6COMMUNITYBENEFIT_1June21.pdf \(iea-wind.org\)](#)

Offshore Wind Farm Projects: Stakeholder Engagement and Community Benefits. May 2021 [Offshore-Wind-Stakeholder-Engagement-KEEGAN-May-31st-2021.pdf \(iea-wind.org\)](#)

The Nature Conservancy: Site Renewables Right (2022) [Site Renewables Right Methods \(nature.org\)](#)

Thank You

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